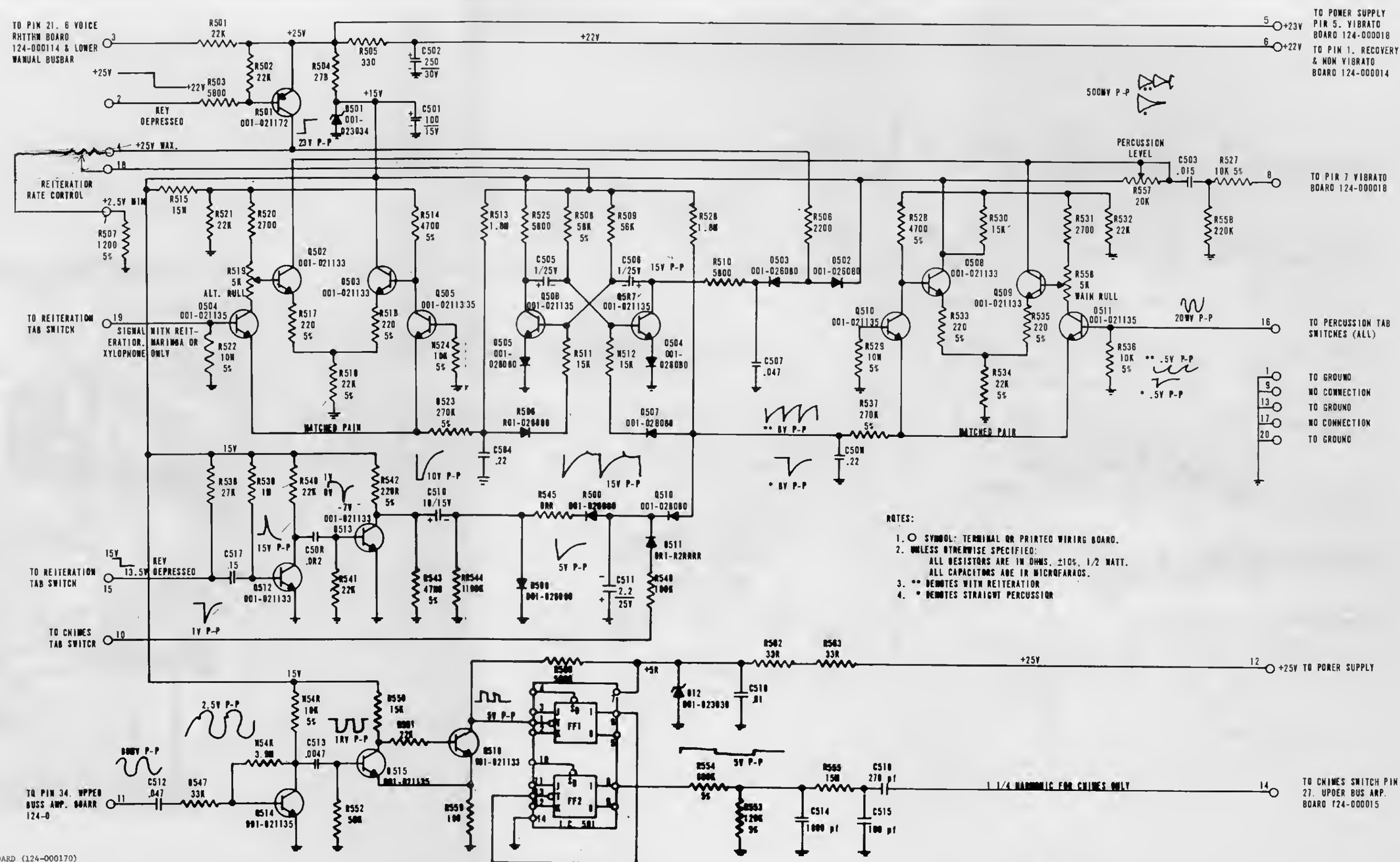
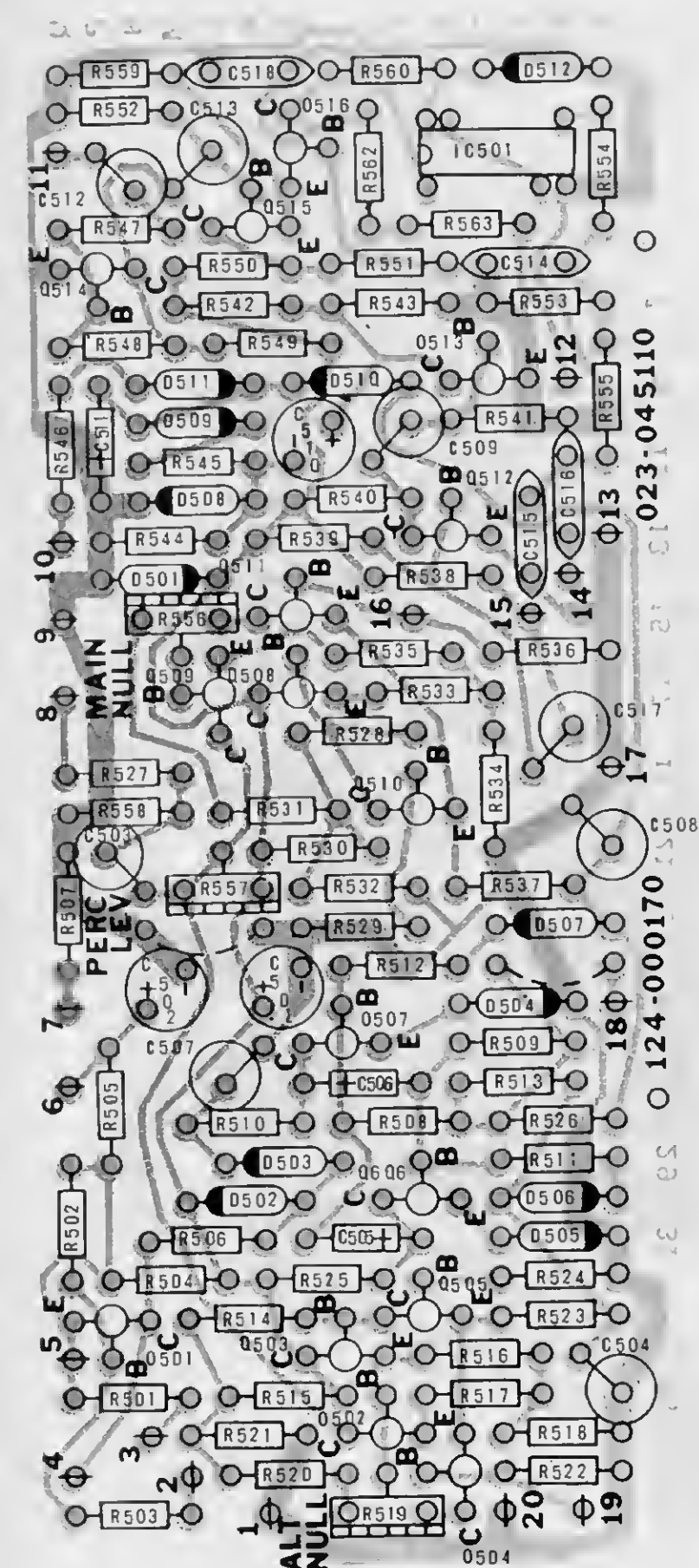


POWER & REVERBERATION AMPLIFIER BOARD (124-000176)

PIN #	WIRE COLOR	TERMINATION
1	Black	Pin #6 of Left Hand 10 Pin Terminal Strip Top of Power Supply
2	Orange	Pin #3 of Left Hand 10 Pin Terminal Strip Top of Power Supply
3	Shield	Blue Plug Output from Reverb Spring Unit.
4	Clear	Cut Off
5	Shield	"J" Cable Reverb II Switch Open
6	Clear	End 100K Resistor.
7	Shield	"K" Cable at Junction of 15 K & 5.6K Resistor between Reverb II & Volume Soft tabs.
8	Clear	"H" Cable at Junction of 2200 pf, 68K, 27K between Vibrato on Upper & Reverb I tabs.
9	Shield	T601
10	Clear	T601
11	Shield	T601
12	Clear	C615 -25V. D.C.
13	Blue	C615 +25V. D.C.
14	Red	T601
15	Black	T601
16	Violet	C615 -25V. D.C.
17	White/Orange	Terminal #3 on 8 Pin Terminal Strip on Baffle Board near Generator.
18	Yellow	Terminal #6 on 8 Pin Terminal Strip on Baffle Board near Generator.
19	Green	Under Side of Power Supply.
20	Black	Emitter of Q605
21	Black	Collector of Q606
22	White/Blue	N/C
23	White/Black	N/C
24	N/C	Red Plug to Reverb Spring Input
25	White/Red	"C" Cable Components & Switch Board #6 between Vibrato on Upper & Reverb I tabs. Junction of 2200 pf & 15K.
26	White/Green	To Expression Pedal.
27	Shield	Cut Off
28	Clear	
29	Shield	
30	Clear	
31	Clear	

FIGURE 5-8
POWER & REVERB AMPLIFIER
BOARD 124-000176,
LAYOUT & SCHEMATIC



PERCUSSION BOARD (124-000170)

PIN #	WIRE COLOR	TERMINATION
1	Black	Pin #3 of J601
2	Red	Reiterate Switch
3	N/C	
4	Yellow	Reiteration Rate Control Pot
5	Red	Tie Terminal Behind Brilliance Tab
6	Red	Pin #5 Vibrato Board
7	Yellow	Pin #1 Recovery & Non-Vibrato Board
8	Violet	Reiteration Rate Control Pot
9	Violet	Pin #7 Vibrato Board
10	N/C	
11	Gray	Chimes Switch
12	Brown	Pin #34 Upper Manual Bus Amplifier Board
13	White/Red	Pin #6 of J601 in Power Supply
14	Black	Grounding Lug Back of Upper Manual
15	Orange	Chimes Switch
16	White	Reiterate Switch
17	Clear	Banjo Switch, Lower Contact
18	Shield	Banjo Switch, Upper Contact
19	N/C	
20	White	Reiteration Rate Control Pot
	Clear	Reiteration Switch, Lower Contact
	Shield	Reiteration Switch, Out Off

FIGURE 5-10
PERCUSSION BOARD 124-000170,
LAYOUT & SCHEMATIC

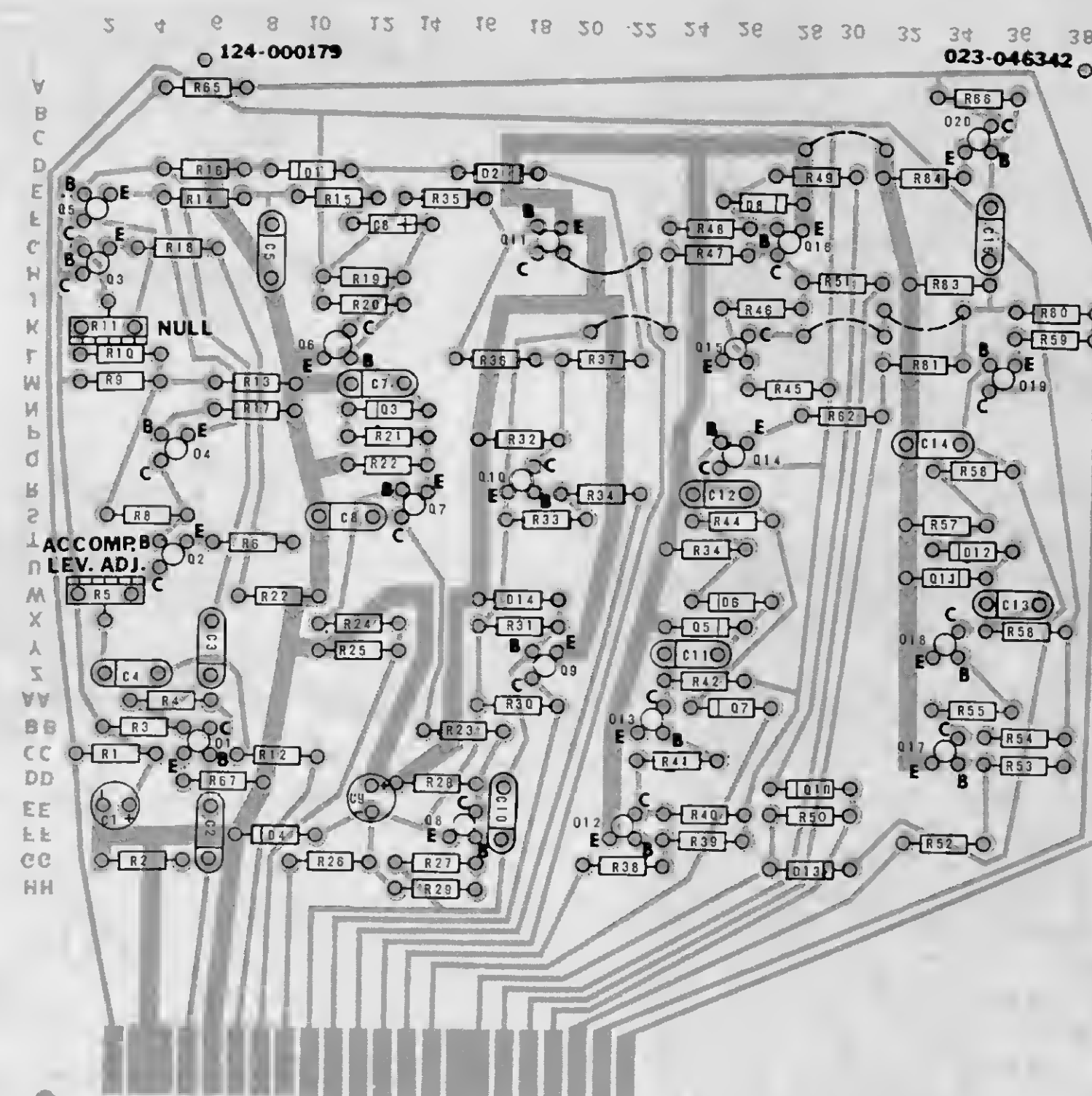
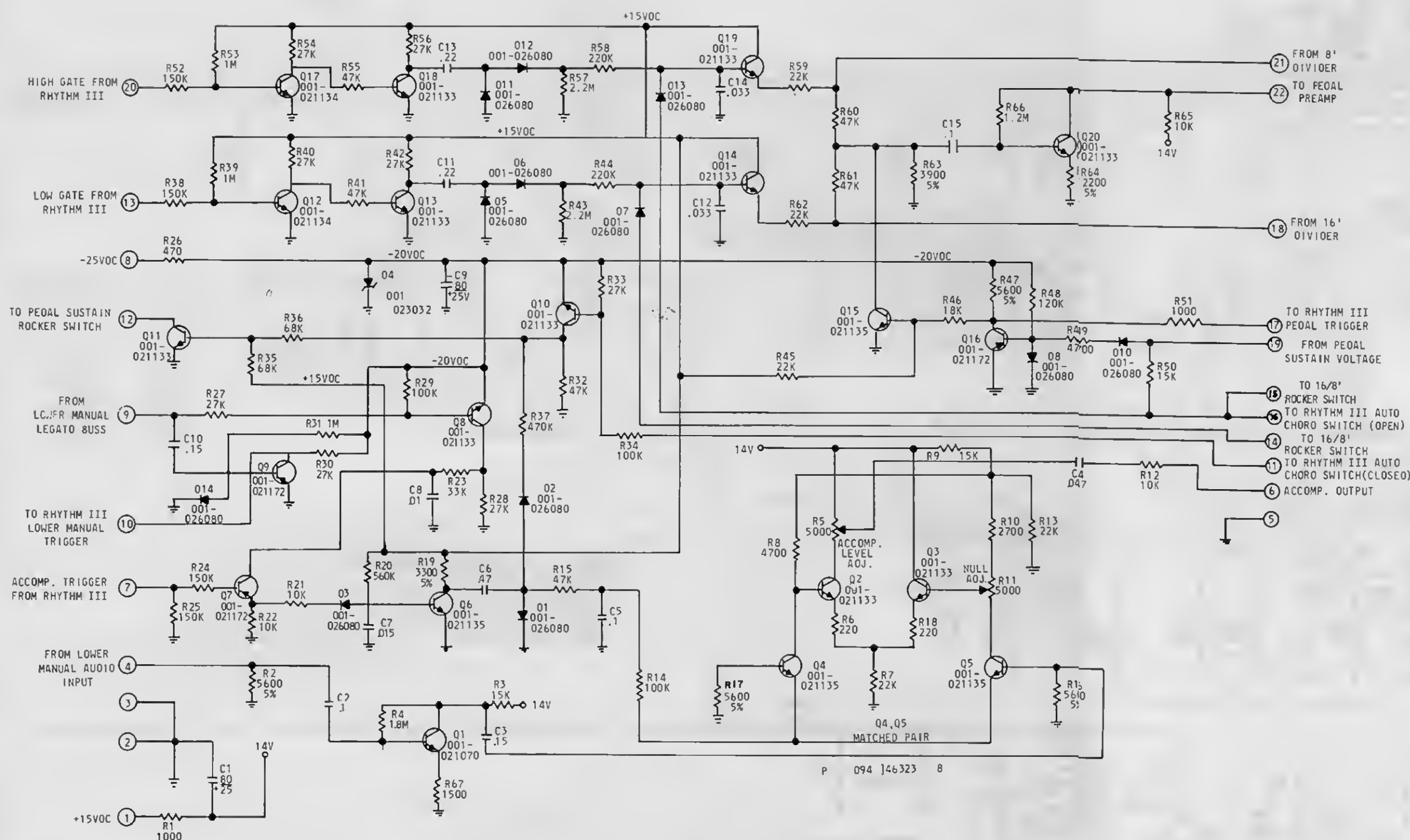
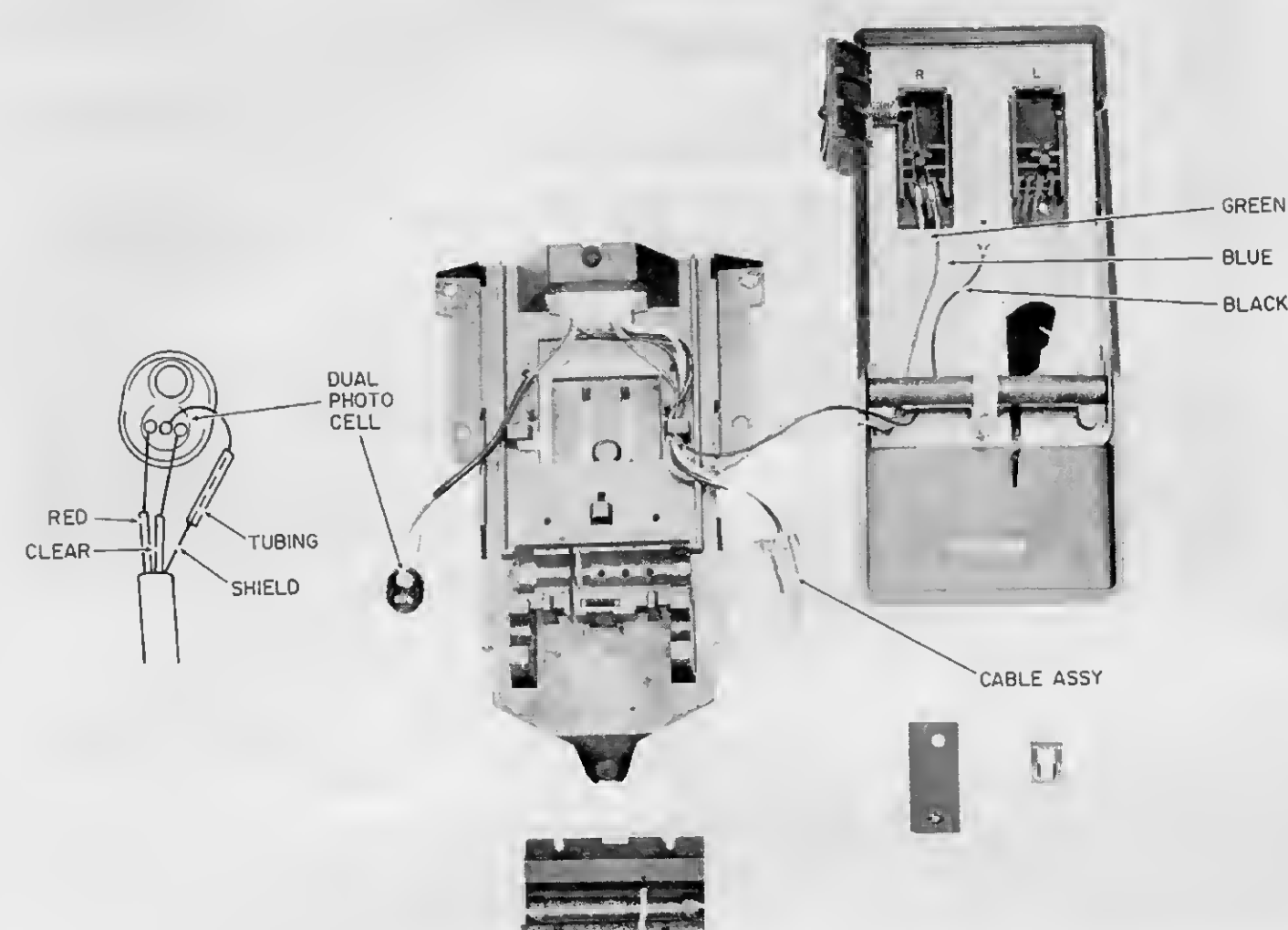


FIGURE 5-11
AUTO CHORD
BOARD 124-000179,
LAYOUT & SCHEMATIC

AUTO CHORD BOARD (124-000179)					
PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION
1	Red	Pin #4 left hand 10 lug terminal strip top of power supply chassis +15 V D.C.	11	Blue	Pin #4, P5 Rhythm Plug
2	Black	Ground lug back of Upper Manual	12	White/Blue	Lower Manual left hand endblock, pedal
3	N/C		13	Gray	16/8' rocker tab.
4	Clear	Cable "A" Switch Panel & Components Board #1 Contact of Lower Manual Tonebars Tab	14	White	Pin #8, P5 Rhythm Plug
		Switch	15	White/Black	Lower Manual left hand endblock, pedal
	Shield	Lower Manual Ensemble 8 Switch Contact	16	White/Black	16/8' rocker tab.
5	Shield	Cut Off	17	White/Brown	Pin #5, J5 Rhythm Plug
6	Clear	Cable "B" Switch Panel & Components Board #1 junction shield cable & 4.7 K	18	White/Red	Pin #7, J5 Rhythm Plug
7	Yellow	Pin #10, P5 Rhythm Plug	19	White/Violet	Pin #11, Pedal Filter & Divider Board
8	Orange	Pin #6 right hand 10 lug terminal strip top of power supply chassis.	20	White/Orange	Pedal Keyer Board #1 Pin #8
9	Brown	Lower Manual 8rush Keying Bus	21	White/Yellow	Pin #9, J5 Rhythm Plug
10	Green	Pin #6, P5 Rhythm Plug	22	Clear	Pin #12 Pedal Filter & Divider Board
				Shield	Pin #2 Pedal Filter & Divider Board
					Pin #6 Pedal Filter & Divider Board



EXPRESSION PEDAL (123-000061)

INTERNAL CONNECTIONS

PIN #	WIRE COLOR	TERMINATION
1	Red	Dual Photo Cell Cable
2	Bare	
3	Clear	
4	N/C	
5	N/C	Foot Switch Right Side
6	N/C	
7	N/C	
8	N/C	
9	N/C	Expression Pedal Lamp
10	Green	
11	Blue	
12	N/C	
13	N/C	
14	Black	
15	Black	

EXPRESSION PEDAL (123-000061)

EXTERNAL CONNECTIONS

PIN #	WIRE COLOR	TERMINATION
1	Clear - Cable	Pin #10 Power & Reverb Amplifier Board
2	Shield	Common for Pins 1 & 3
3	Clear - Cable	Pin #31 Power & Reverb Amplifier Board
4	N/C	
5	N/C	
6	N/C	
7	N/C	
8	N/C	Pin #3 Plug J5 Rhythm III
9	N/C	
10	Brown	Pin #7 Left Hand 10 Lug Terminal
11	Black	Strip Top of Power Supply Chassis
12	N/C	Pin #3 of Right Hand 10 Lug Terminal
13	N/C	
14	White	Strip Top of Power Supply Chassis
15	Black	Pin #6 of Right Hand 10 Lug Terminal
		Strip Top of Power Supply Chassis

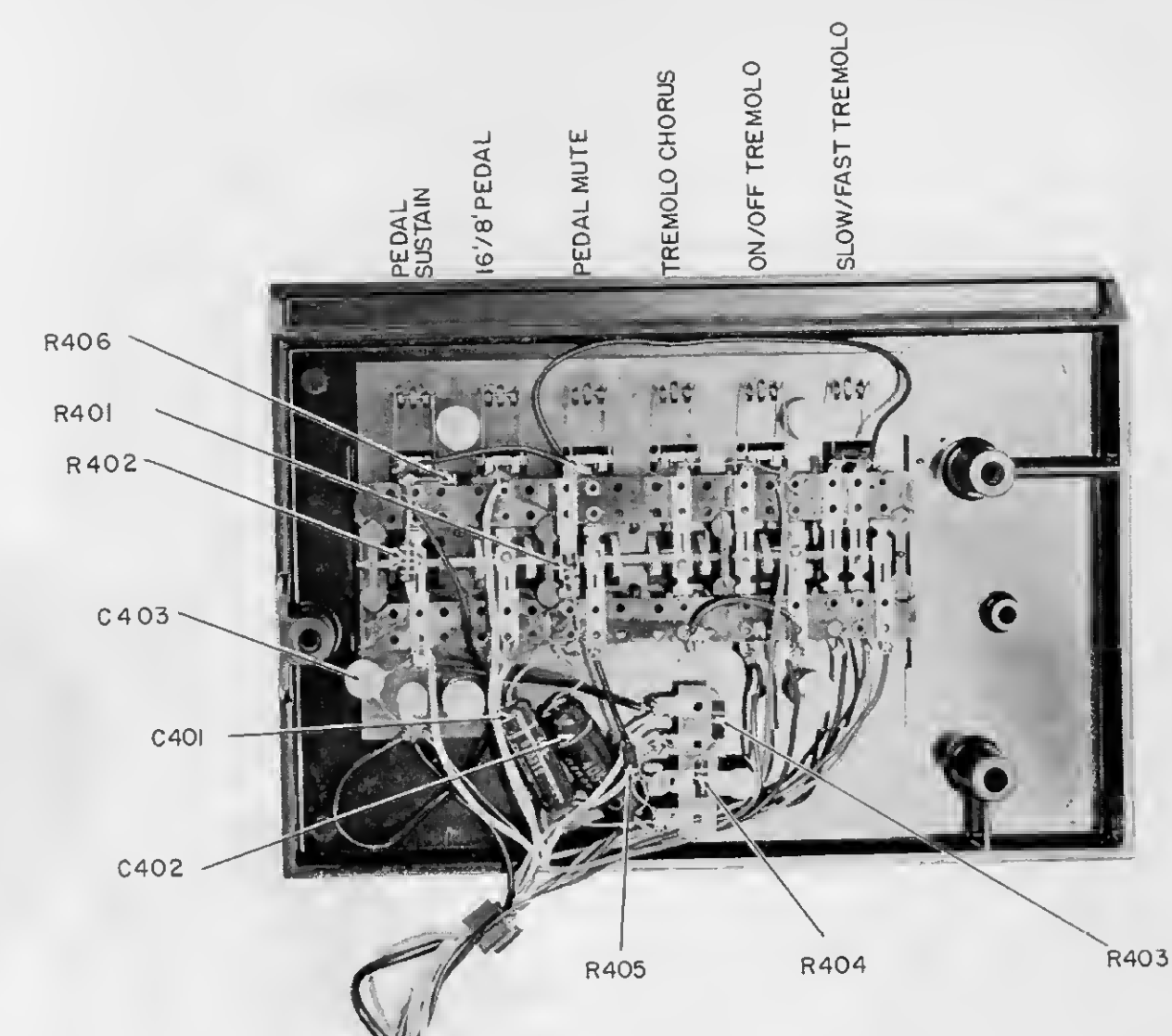


FIGURE 5-12
SPECIAL EFFECTS END BLOCK
125-000073, LAYOUT

FIGURE 5-13
EXPRESSION PEDAL
123-000061, LAYOUT

DRUM SCANNER (066-042874)

Item No.	Part Name	Part No.
1,2 27,28	Pan Head Thread Cutting Screw	907-030314
3	Cover Plate	041-042236
4,22	Brush and Lug Assembly	060-042609
5,6 21,24	#8 Keps Hex Nut	999-001264
7	Drive and Endcap Assembly	060-042601
8,9 18,19	Sems Hex Head Machine Screw	831-020314
10	Rotor and Pin Assembly	060-042597
11	Spacer Washer (Phenolic)	999-044671
12,13	Washer	999-044395
14	Grounding Spring	012-043907
15,17	Mounting Post	044-042865
16	Segmented Scanner Tube	045-042112
20	Endcap and Bearing Assembly (Stationary)	060-047300
23	Cable Clamp	013-042866
25	Cover Plate	041-042237
26	Terminal Lug	007-002974
29	Snap-On Contact (16-Used)	030-042583

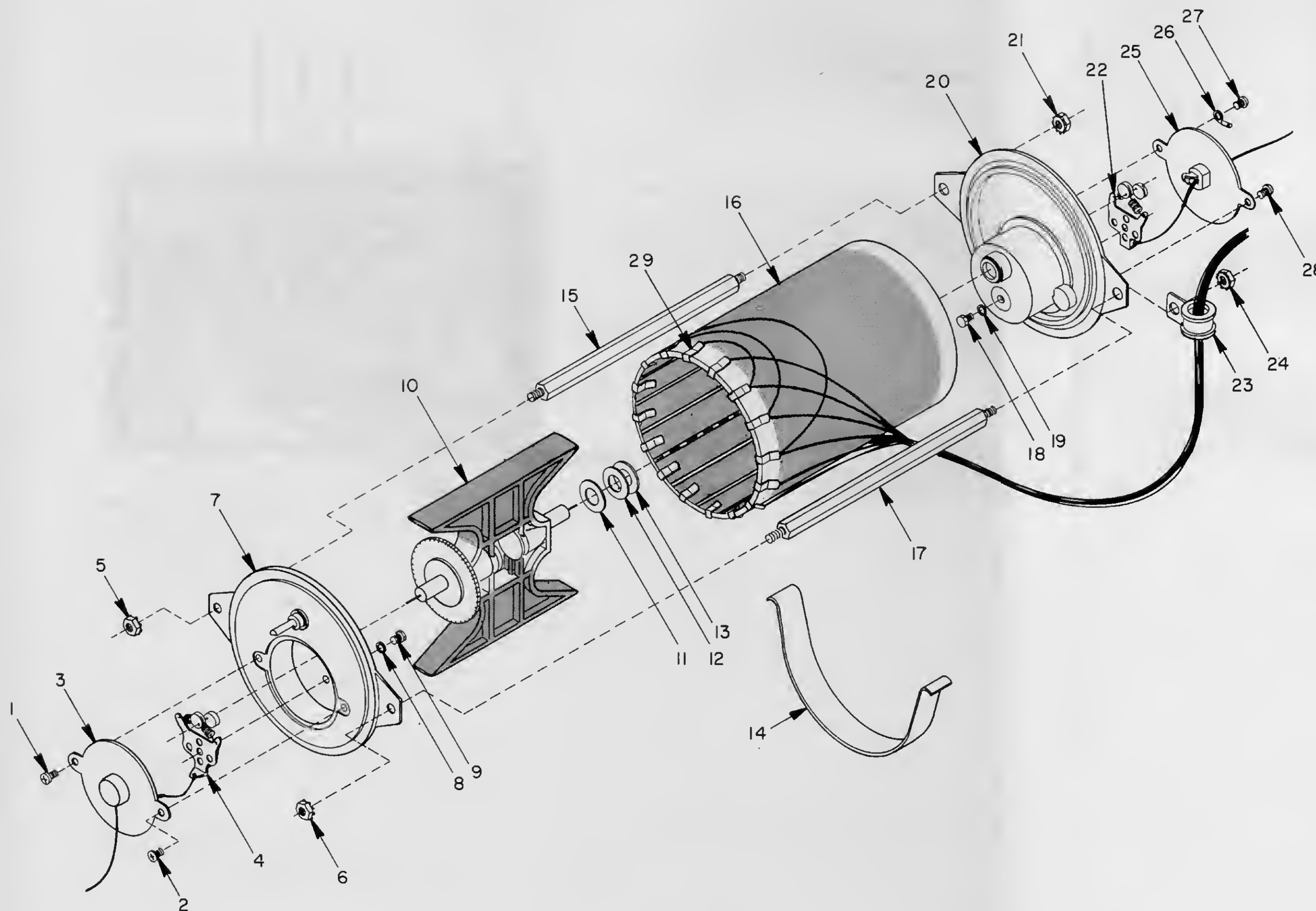
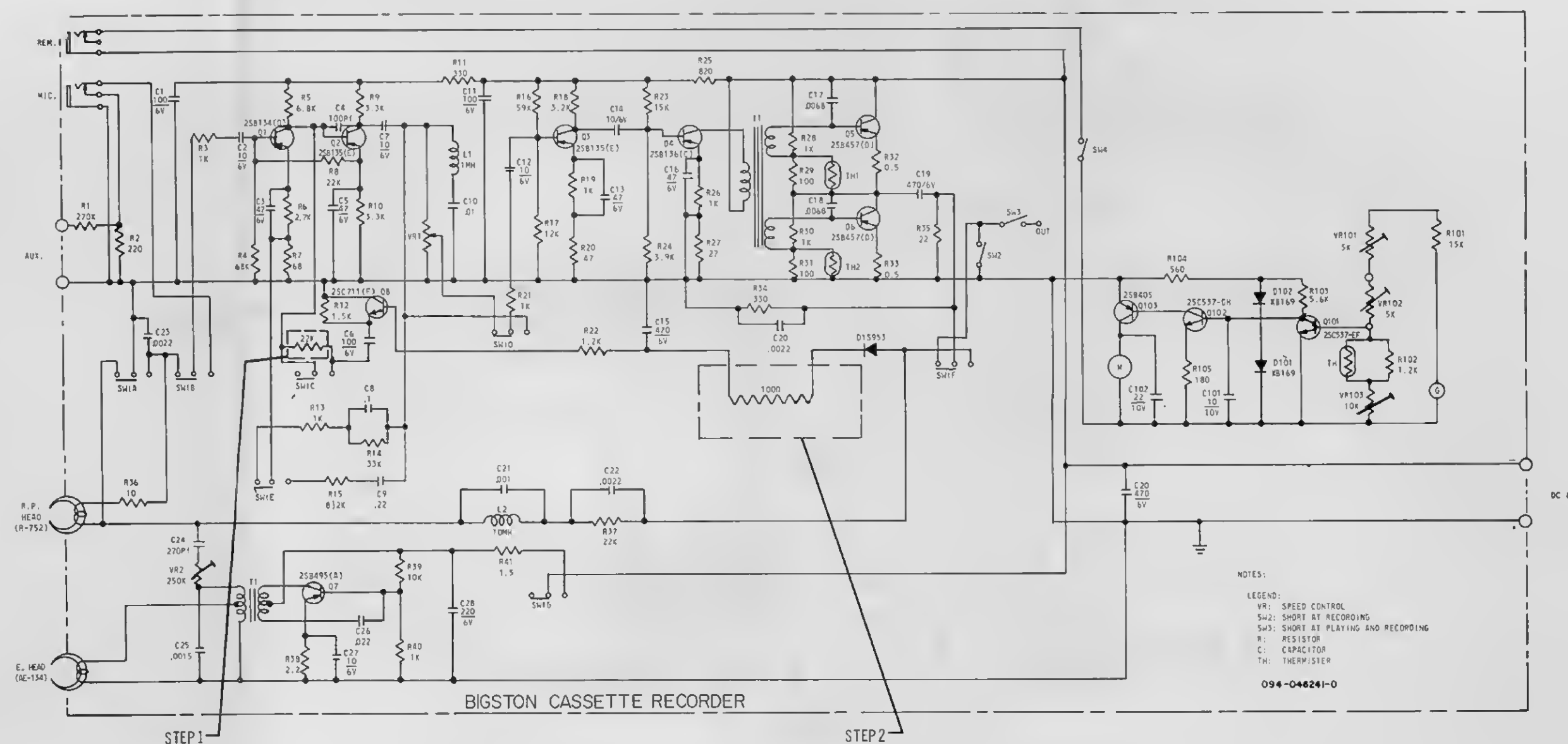
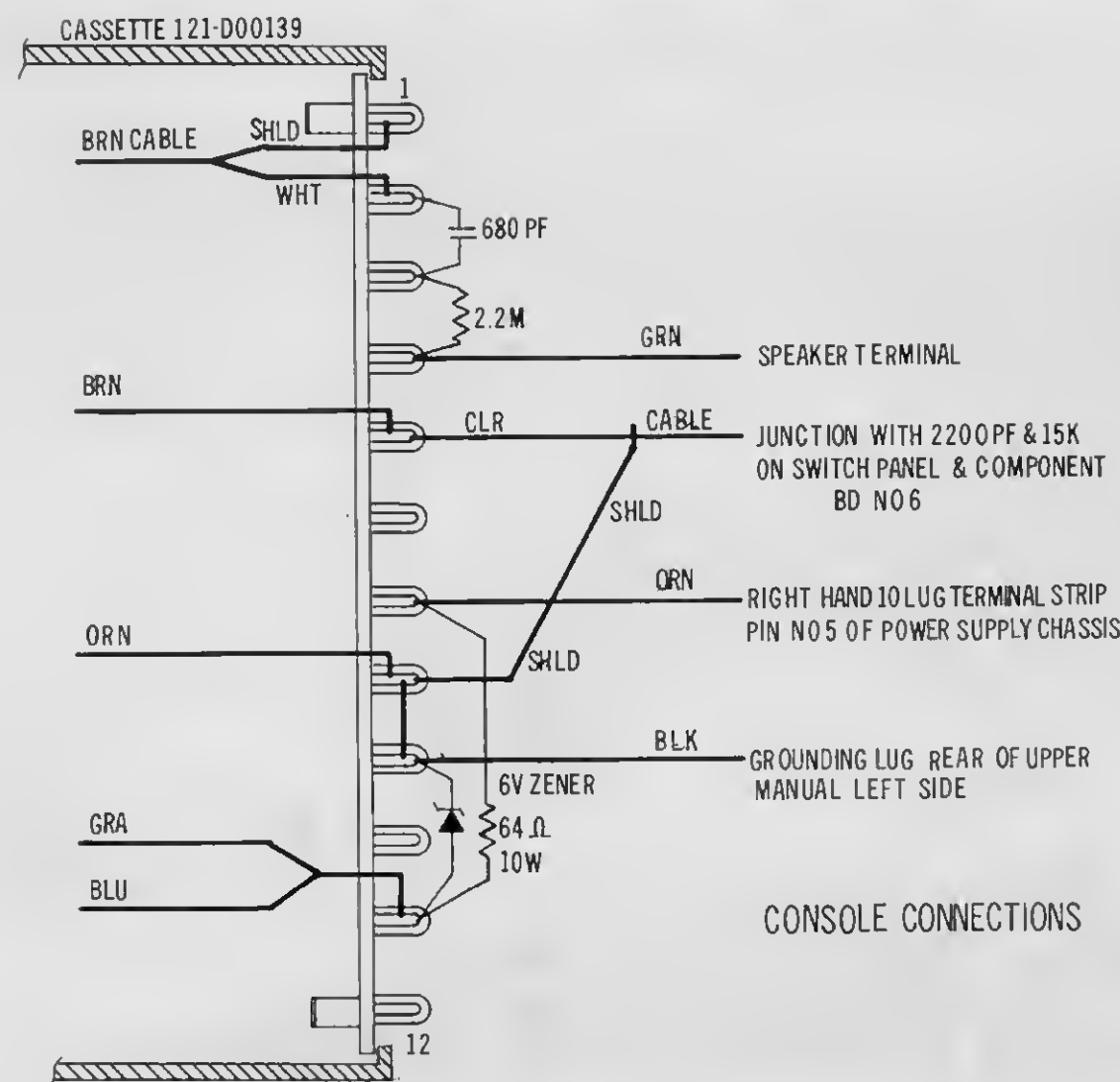


FIGURE 5-14
DRUM SCANNER
066-042874



CASSETTE RECORDER VOLUME FLUCTUATIONS

In order to correct the volume level changes which take place when recording directly from these models, we suggest making the following changes.

Refer to Figure A and Cassette Schematic.

1. Add 22K (1/2 or 1/4 watt) resistor across record terminals (one end on C6) of SW-1C to keep C6 polarized.
2. Add 100 ohm (1/2 or 1/4 watt) resistor in series with diode D1 (one end of C15) to prevent overcharging of C15 on beginning of large signals.
3. Operate each unit for 5 minutes in the record mode.
4. Test cassette by recording a high level signal for a period of one minute.

NOTE

If Large amplitude of level changes are observed, replace C6 or return cassette unit to factory for replacement.

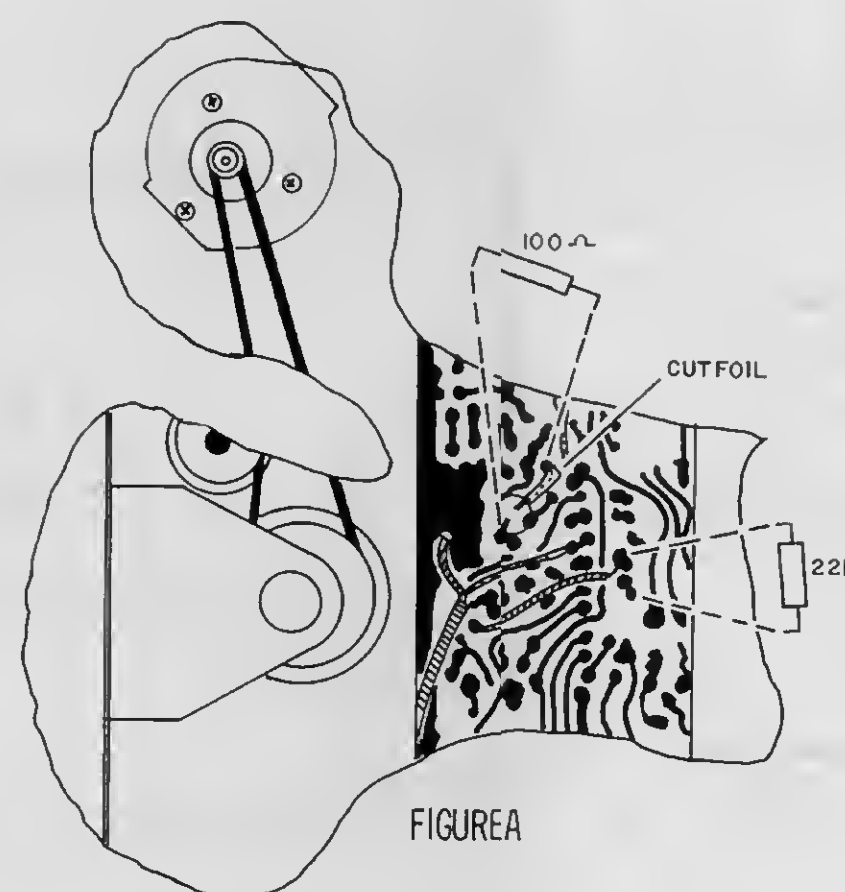


FIGURE A

FIGURE 5-15
CASSETTE RECORDER ASSEMBLY
121-000139 & 121-000165,
LAYOUT & SCHEMATIC

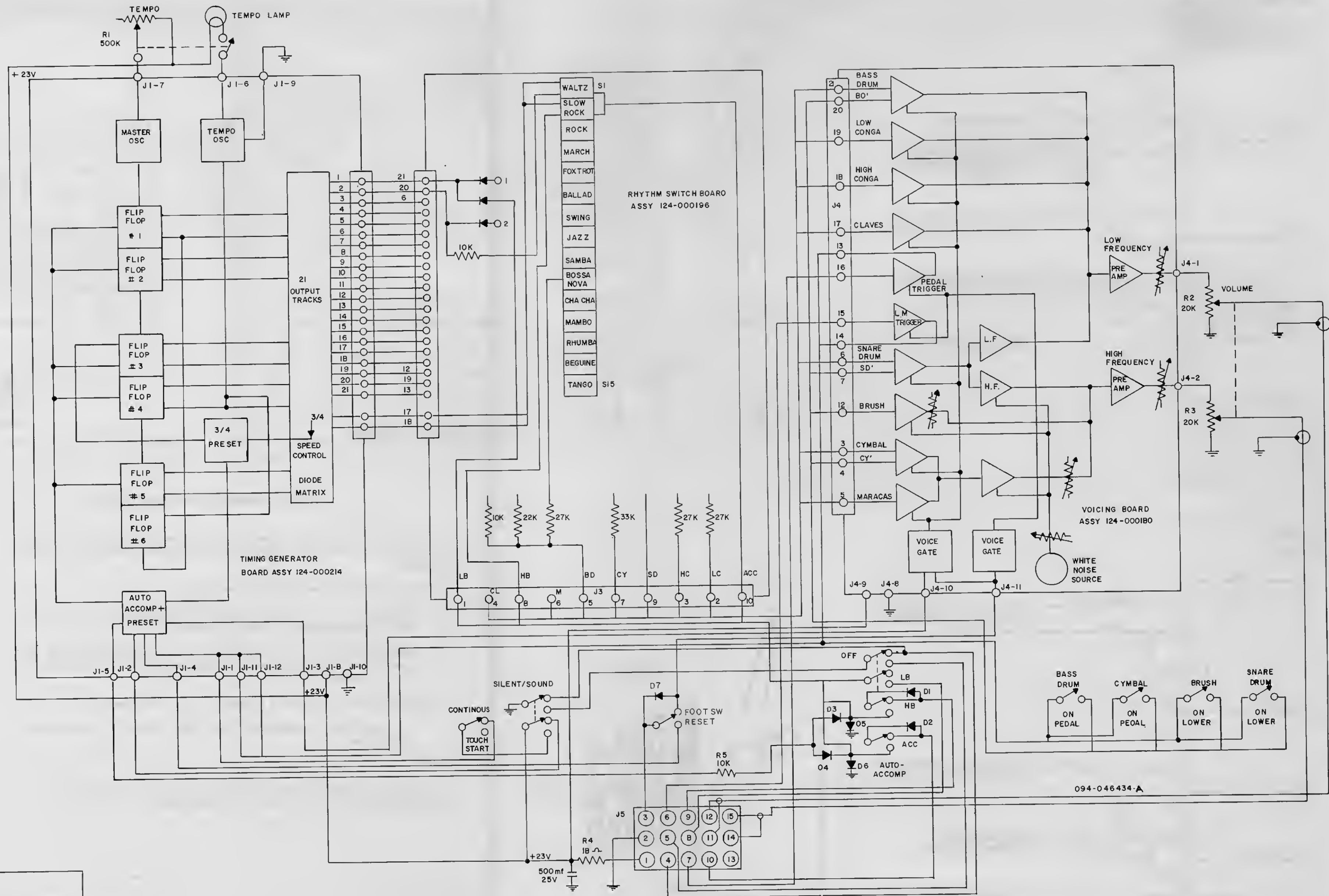


FIGURE 5-16
RHYTHM III
BLOCK LOGIC DIAGRAM
125-000082

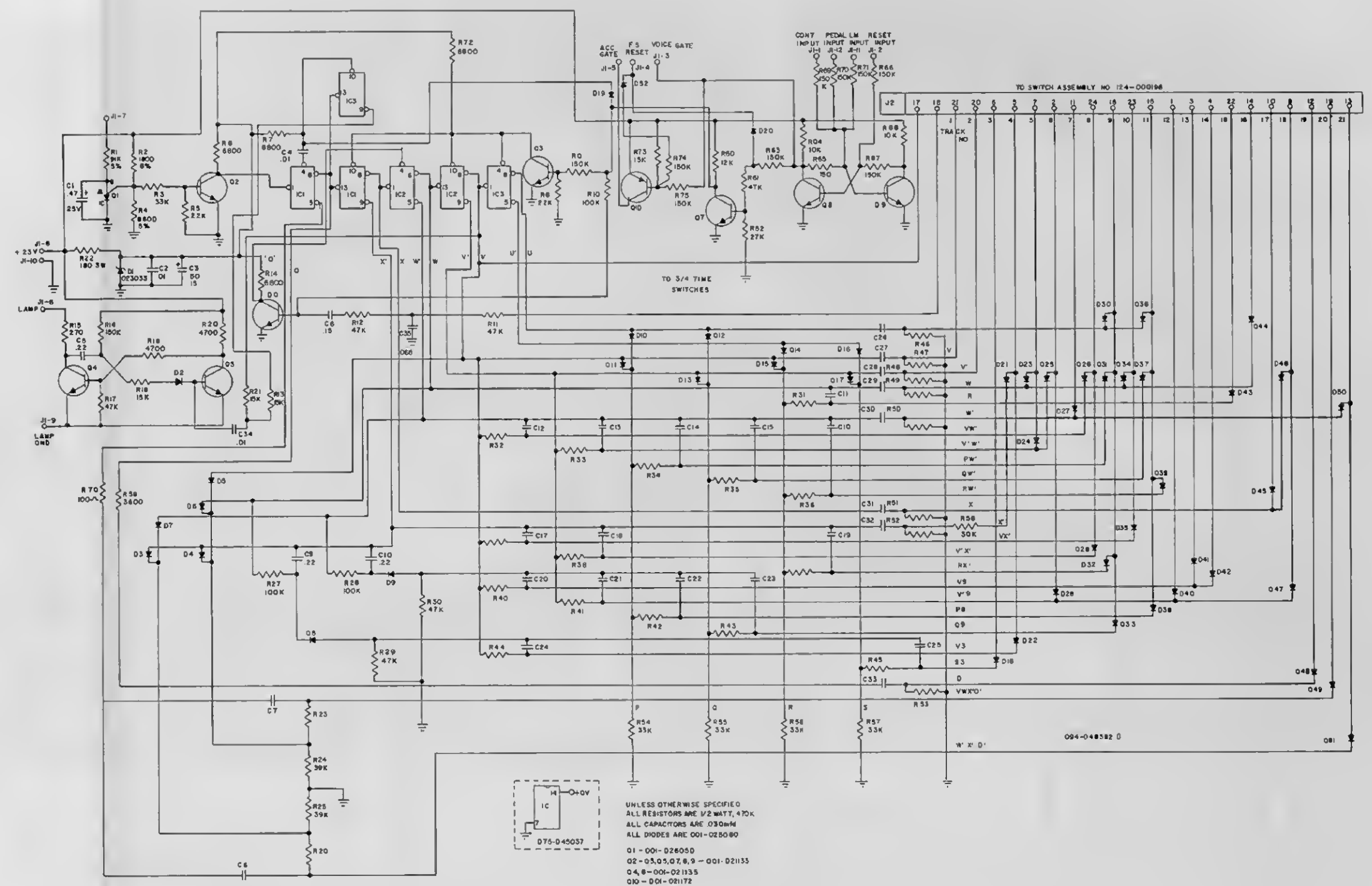
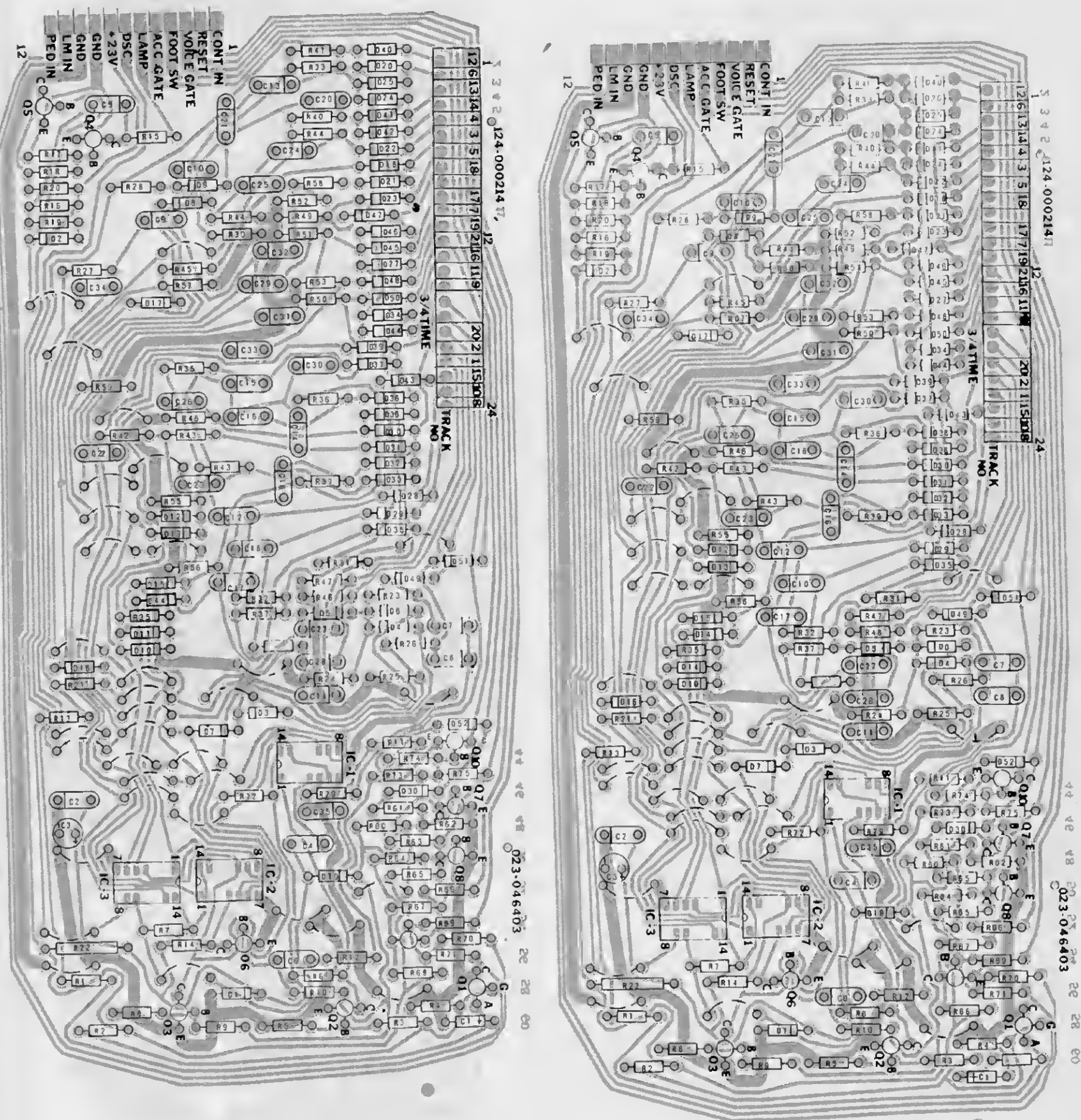
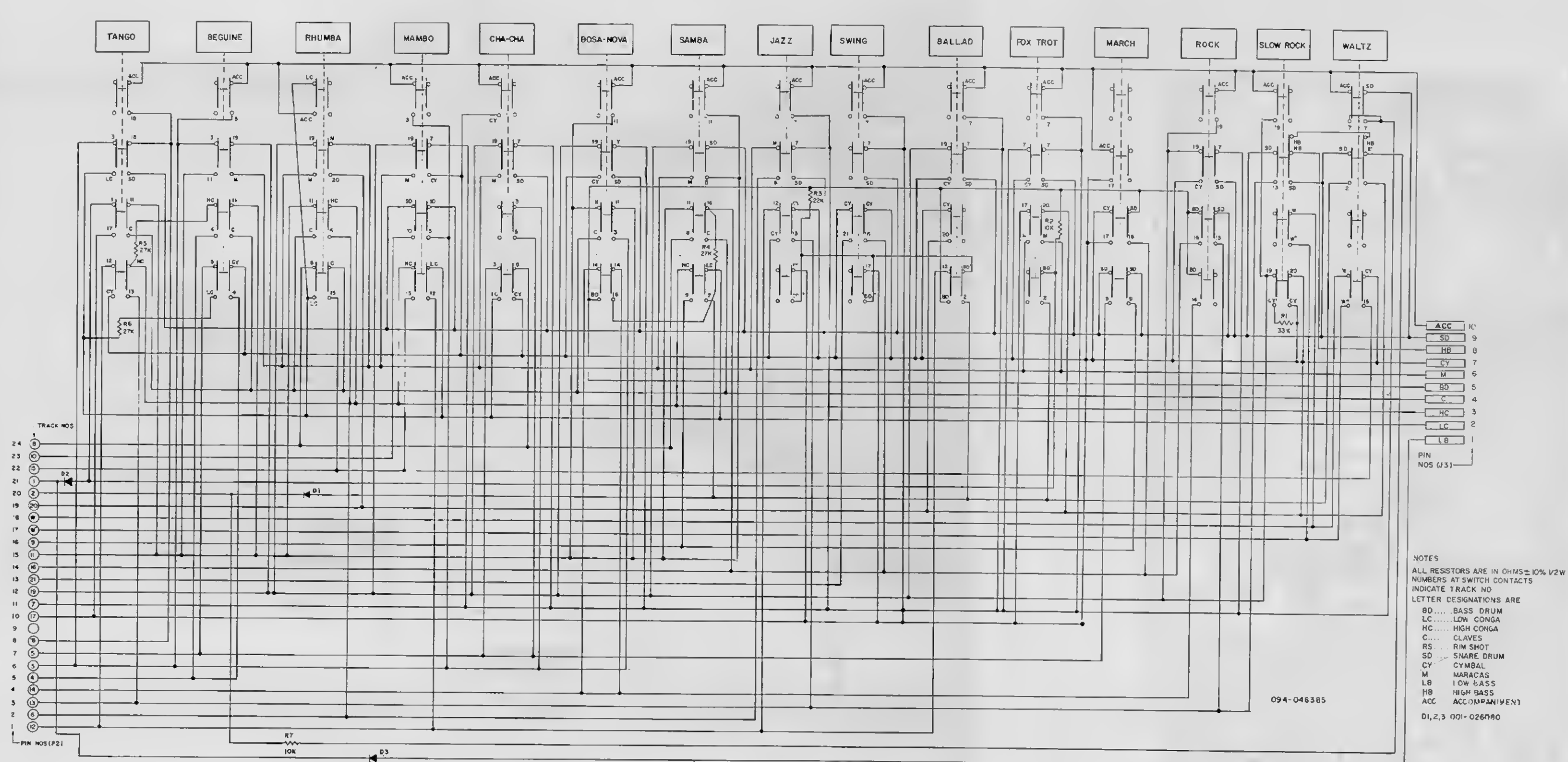


FIGURE 5-17
RHYTHM III GENERATOR & TRACK GATE
BOARD 124-000214,
LAYOUT & SCHEMATIC



NOTES
 ALL RESISTORS ARE IN OHMS $\pm 10\%$ 1/2W
 NUMBERS AT SWITCH CONTACTS
 INDICATE TRACK NO
 LETTER DESIGNATIONS ARE
 BD... BASS DRUM
 LC... LOW CONGA
 HC... HIGH CONGA
 C... CLAVES
 RS... RIM SHOT
 SD... SNARE DRUM
 CY... CYMBAL
 M... MARACAS
 LB... LOW BASS
 HB... HIGH BASS
 ACC... ACCOMPANIMENT
 D1,2,3 001-026090

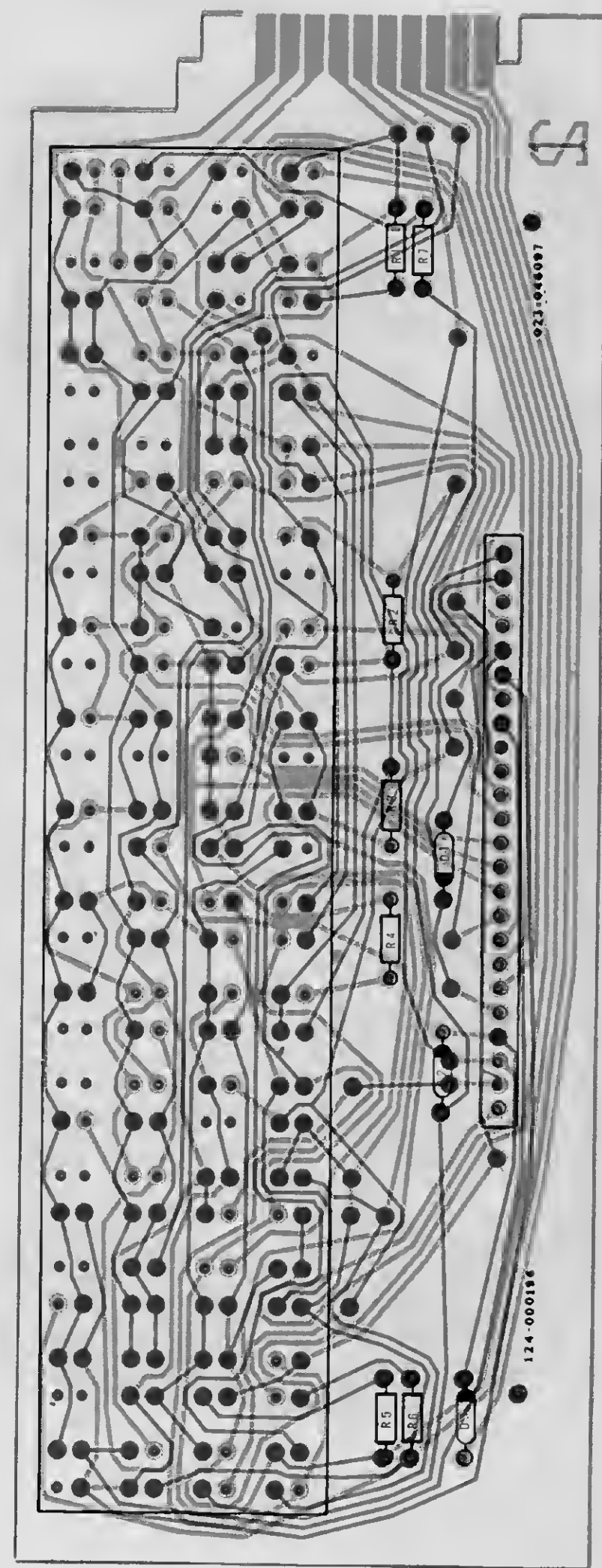


FIGURE 5-18
 RHYTHM III SELECTOR SWITCH
 BOARD 124-000196,
 LAYOUT & SCHEMATIC

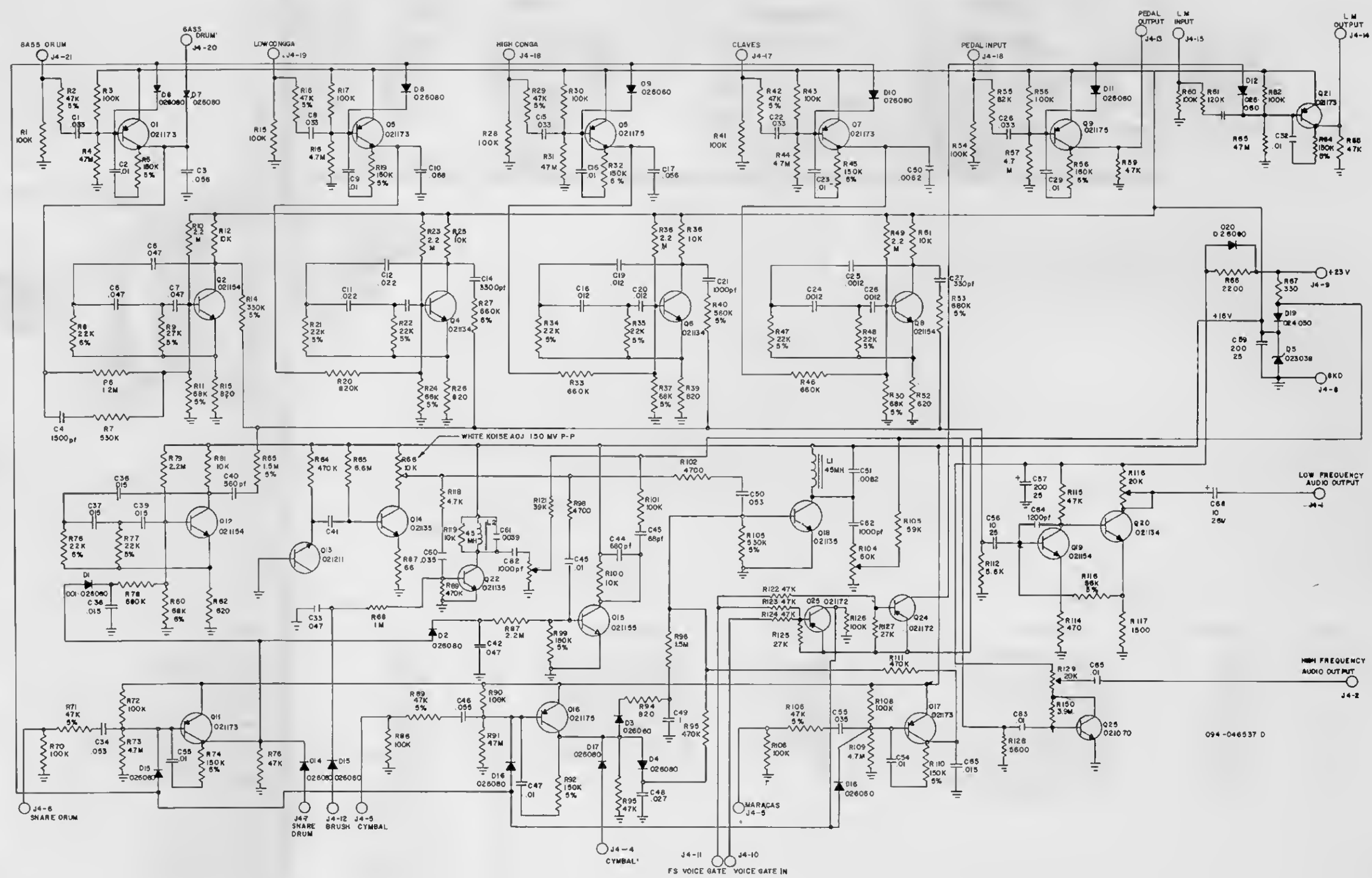
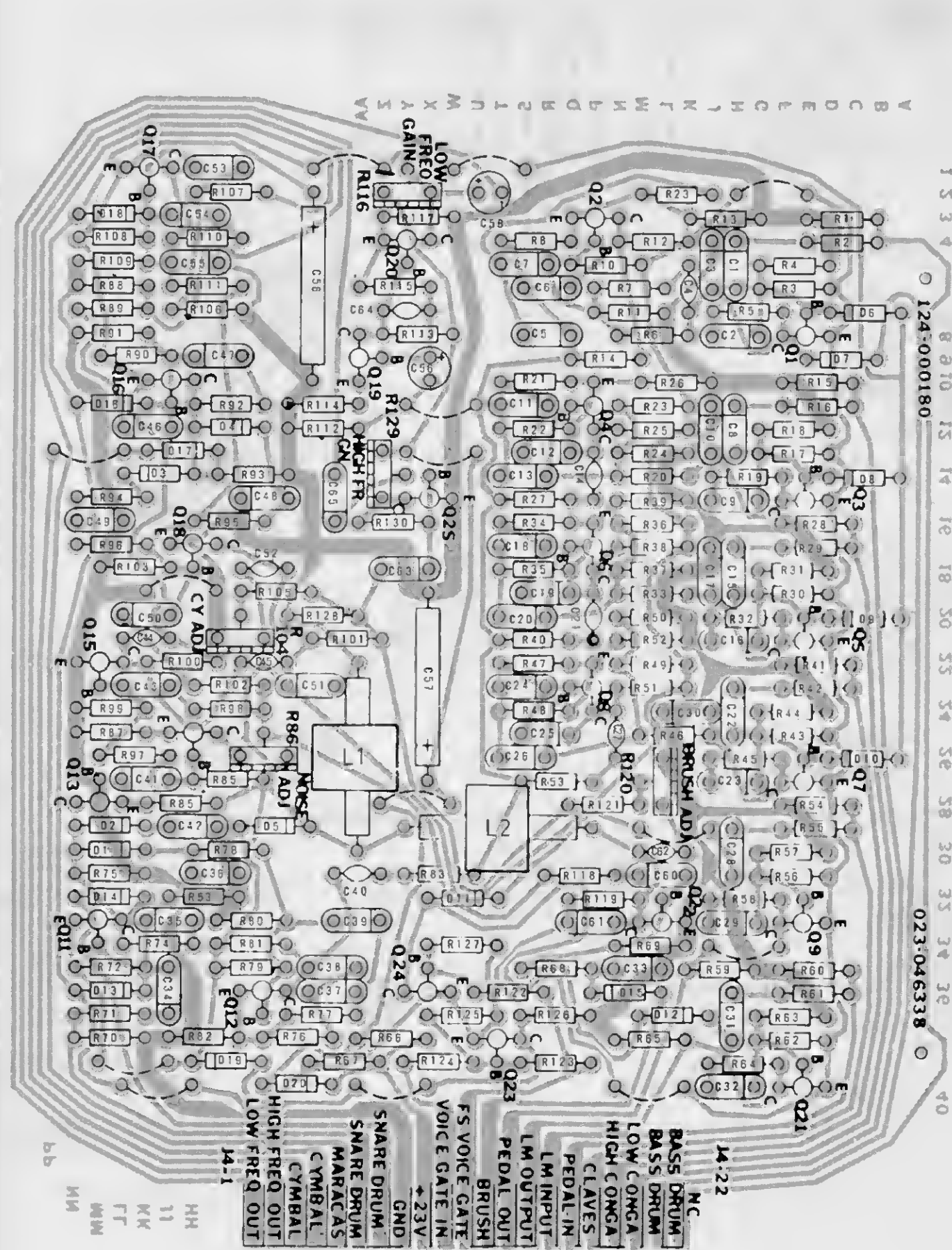
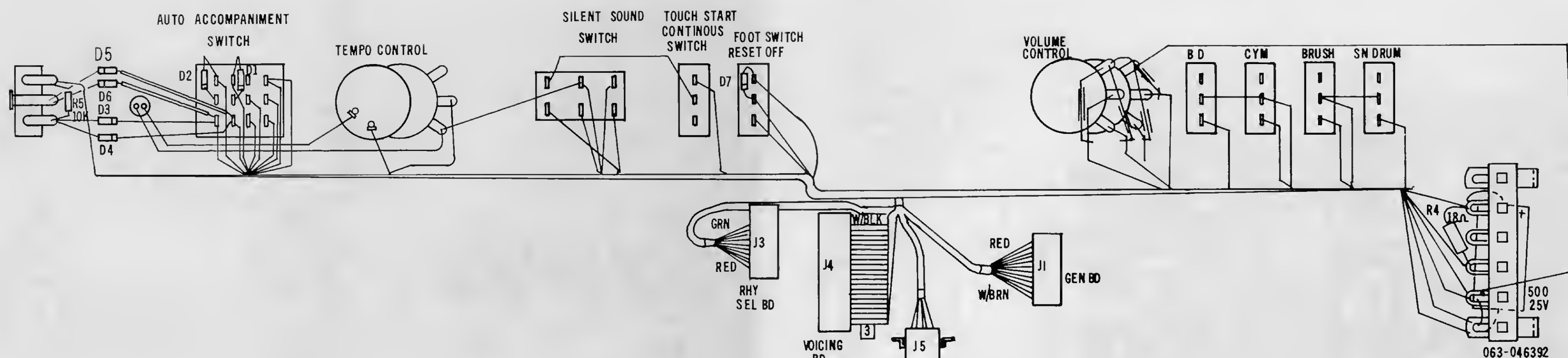


FIGURE 5-19
RHYTHM III VOICING
BOARD 124-000180,
LAYOUT & SCHEMATIC



PLUG J1 GENERATOR BOARD

PLUG J3 RHYTHM SELECTOR BOARD

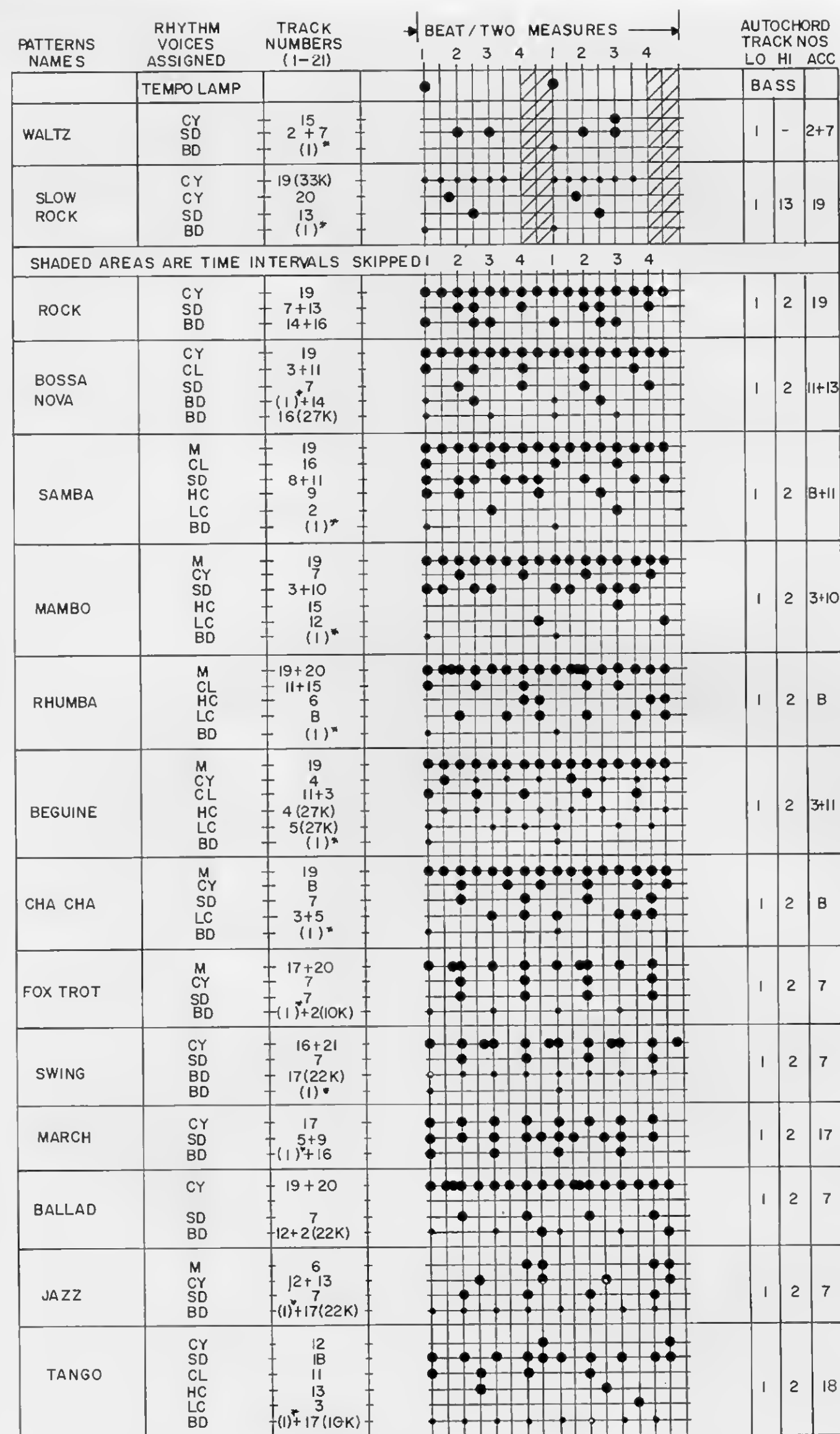
PLUG J4 VOICING BOARD

PLUG J5 RHYTHM INPUT - OUTPUT

PLUG J5 RHYTHM INPUT - OUTPUT

PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION	PIN #	WIRE COLOR	TERMINATION
1	Red	Touch Start/Continuous Switch	1	Red	Auto Accompaniment Switch	1	#3 Cable	Volume Control Rhythms III	1	Red	Terminal Strip 063-046392	1	Blue	Top of Power Supply Assembly
2	Brown	Silent/Sound Switch	2	White/Violet	Pin #19 Plug J4 Rhythms III	2	#4 Cable	Volume Control Rhythms III	2	Black	Ground of Terminal Strip 063-046392	2	Black	Left Hand Terminal Strip Pin #8, +25V D.C.
3	Violet	Pin #10 of Plug J4 Rhythms III	3	White/Blue	Pin #18 Plug J4 Rhythms III	3	Brown	Pin #7 Plug J3 Rhythms III	3	White	Foot Switch Reset/Off Switch	3	Black	Tone Wheel Generator Grounding
4	Orange	Foot Switch Reset/Off Switch	4	White/Green	Pin #17 Plug J4 Rhythms III	4	Red	Cymbal Switch	4	Orange	Auto Accompaniment Switch	4	Black	Lug
5	Yellow	Terminal Strip 063-046393	5	White/Black	Pin #21 Plug J4 Rhythms III	5	Orange	Pin #6 Plug J3 Rhythms III	5	Brown	Auto Accompaniment Switch	5	Black	Pin #10 Expression Pedal Plug
6	Green	Tempo Control	6	Orange	Pin #5 Plug J4 Rhythms III	6	Yellow	Pin #9 Plug J3 Rhythms III	6	White/Orange	Pin #15 Plug J4 Rhythms III	6	White/Black	Pin #11 of Auto Chord Board
7	Gray	Tempo Control	7	Brown	Pin #3 Plug J4 Rhythms III	7	Green	Snare Drum Switch	7	White/Yellow	Pin #16 Plug J4 Rhythms III	7	Green	Pin #16 of Auto Chord Board
8	White/Red	Pin #9 Plug J4 Rhythms III	8	White/Orange	Auto Accompaniment Switch	8	Black	Ground of Terminal Strip 063-046392	8	Green	Auto Accompaniment Switch	8	White/Brown	Pin #17 of Auto Chord Board
9	White/Red	Terminal Strip 063-046392	9	Yellow	Pin #6 Plug J4 Rhythms III	9	White/Red	Silent/Sound Switch	9	Blue	Auto Accompaniment Switch	9	Gray	Pin #13 of Auto Chord Board
10	Black	Ground Terminal Strip 063-046392	10	Gray	Auto Accompaniment Switch	10	Violet	Pin #8 Plug J1 Rhythms III	10	Violet	Auto Accompaniment Switch	10	White/Orange	Pin #20 of Auto Chord Board
11	White/Black	Silent/Sound Switch	11	N/C	Auto Accompaniment Switch	11	Gray	Pin #3 Plug J1 Rhythms III	11	Shield Cable #1	Volume Control	11	Yellow	Pin #7 of Auto Chord Board
12	Blue	Pin #14 Plug J4 Rhythms III	12	N/C	Auto Accompaniment Switch	12	White	Foot Switch Reset/Off Switch	12	Clear		12	Shield	Cable "L"
13	White/Brown	Pin #13 Plug J4 Rhythms III	13	White/Gray	Auto Accompaniment Switch	13	White/Brown	Cymbal Switch	13	N/C		13	Clear	Switch Panel & Component Assembly #6
14	Blue		14	White/Black	Auto Accompaniment Switch	14	Blue	Pin #12 Plug J1 Rhythms III	14	Shield Cable #2	Volume Control	14	Shield	Open End of 18K between Reverb II & Volume Soft
15	White/Orange		15	Blue	Auto Accompaniment Switch	15	White/Orange	Brush Switch	15	Clear		15	Clear	Cable "H"
16	White/Yellow		16	White/Orange	Auto Accompaniment Switch	16	White/Yellow	Pin #11 Plug J1 Rhythms III						Switch Panel 6 Component Assembly #6
17	White/Green		17	White/Orange	Auto Accompaniment Switch	17	White/Green	Pin #6 Plug J5 Rhythms III						Junction of 15K and White Wire
18	White/Blue		18	White/Orange	Auto Accompaniment Switch	18	White/Blue	Pin #7 Plug J5 Rhythms III						from Switch Panel & Component
19	White/Violet		19	White/Orange	Auto Accompaniment Switch	19	White/Violet	Pin #4 Plug J3 Rhythms III						Assembly #5
20	White/Gray		20	White/Orange	Auto Accompaniment Switch	20	White/Gray	Pin #3 Plug J3 Rhythms III						
21	White/Black		21	White/Orange	Auto Accompaniment Switch	21	White/Black	Pin #2 Plug J3 Rhythms III						
22	N/C		22	N/C	Auto Accompaniment Switch	22	N/C	Pin #5 Plug J3 Rhythms III						

FIGURE 5-20
RHYTHM III CABLE ASSEMBLY
011-046388



HC — HIGH CONGA
LC — LOW CONGA
RS — RIM SHOT
C — CLAVES
SD — SNARE DRUM
M — MARACAS
CY — CYMBAL
BD — BASS DRUM

Small Dots indicate attenuated loudness.
Bass Drum always connected to track 1 through 10K

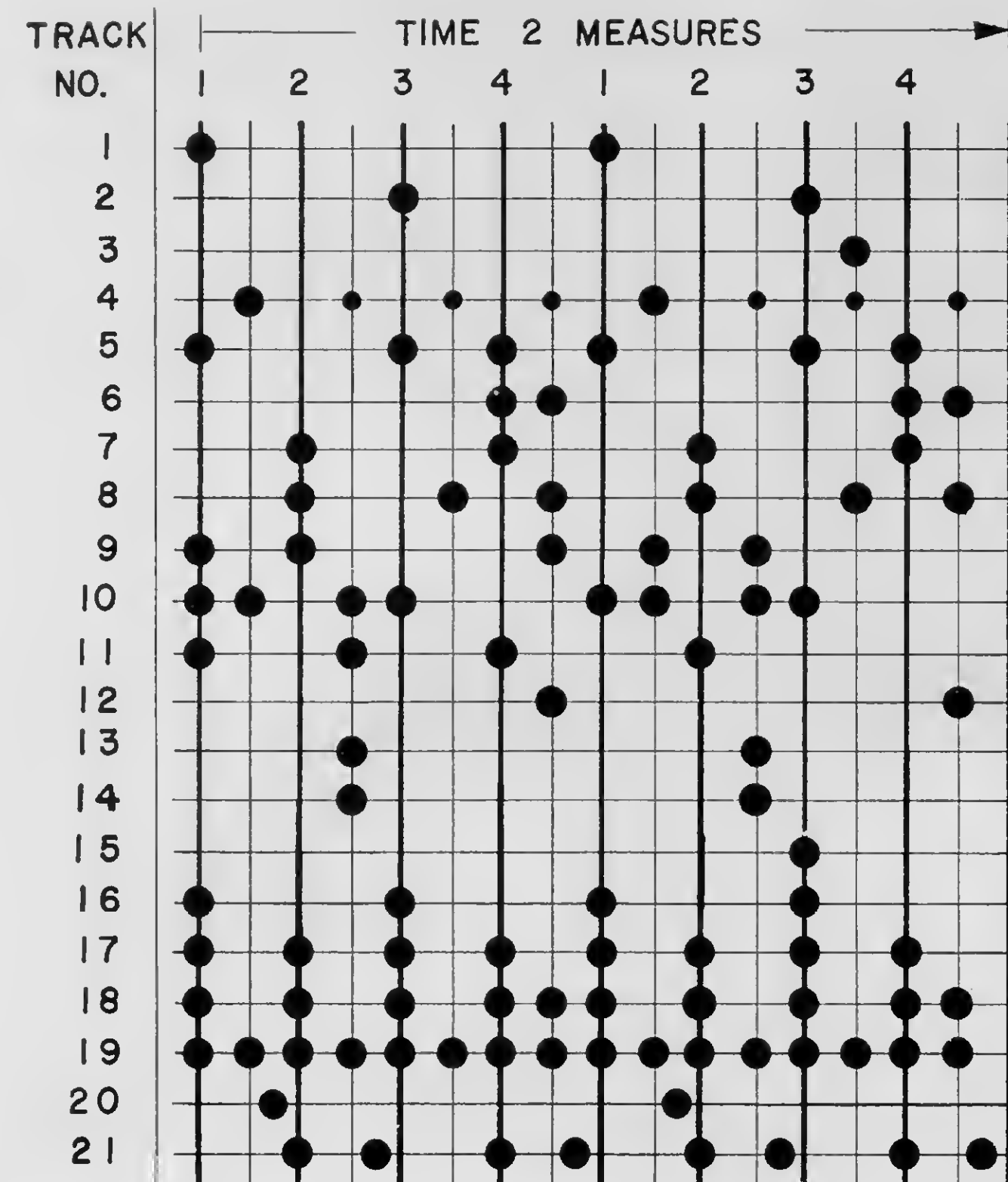


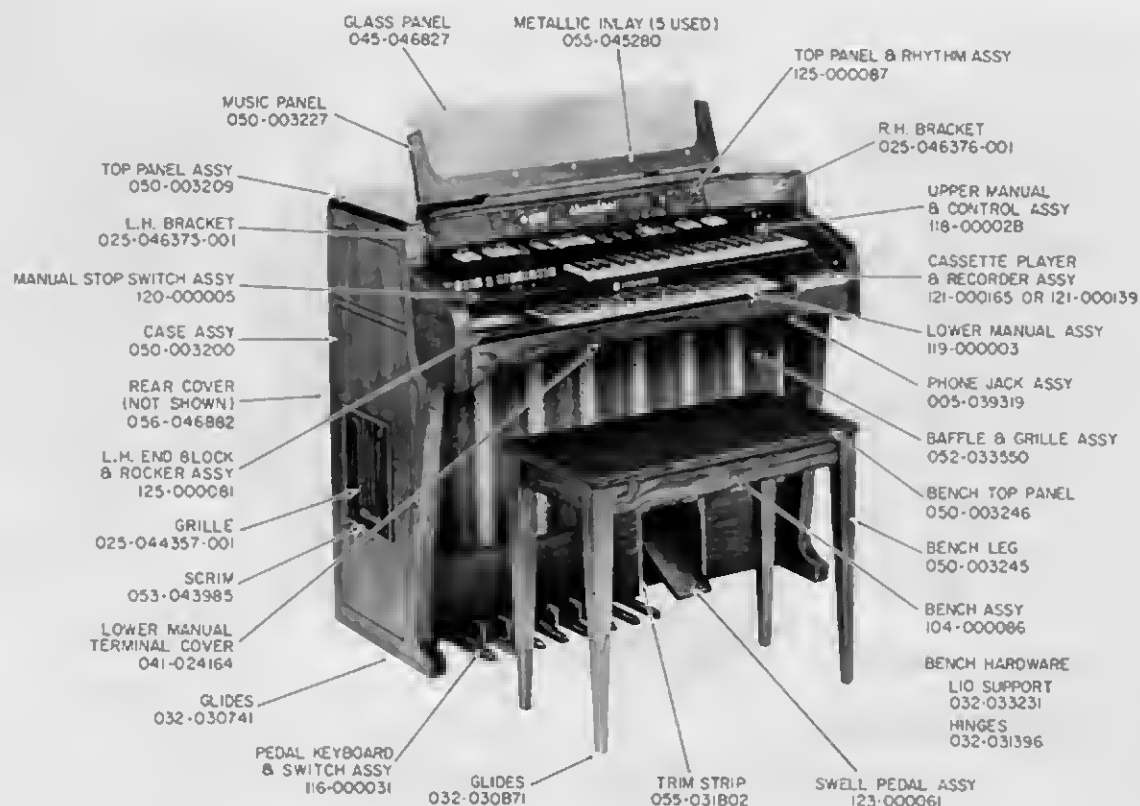
FIGURE 5-21
RHYTHM III
OUTPUT MATRIX TIMING
& VOICING PATTERNS CHARTS

SECTION VI PARTS LIST

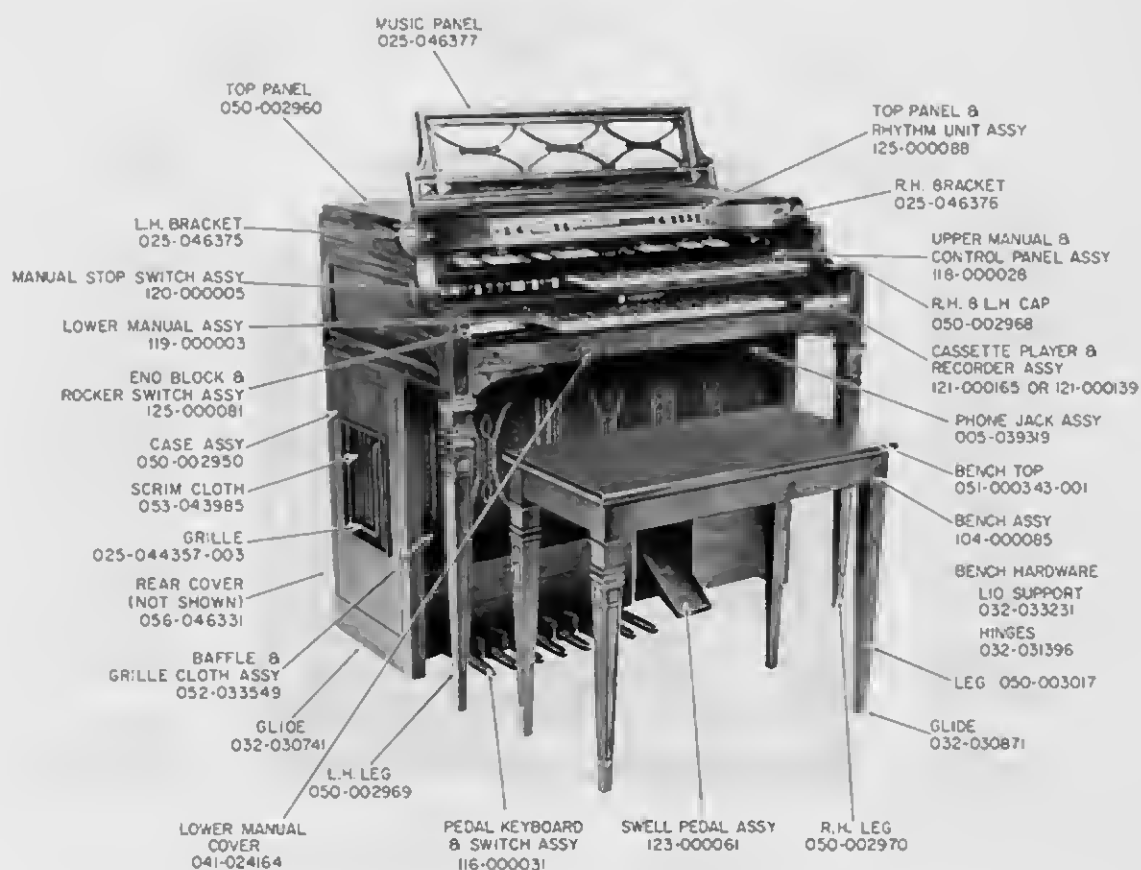
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Console (524C) Front View



Console (582C) Front View